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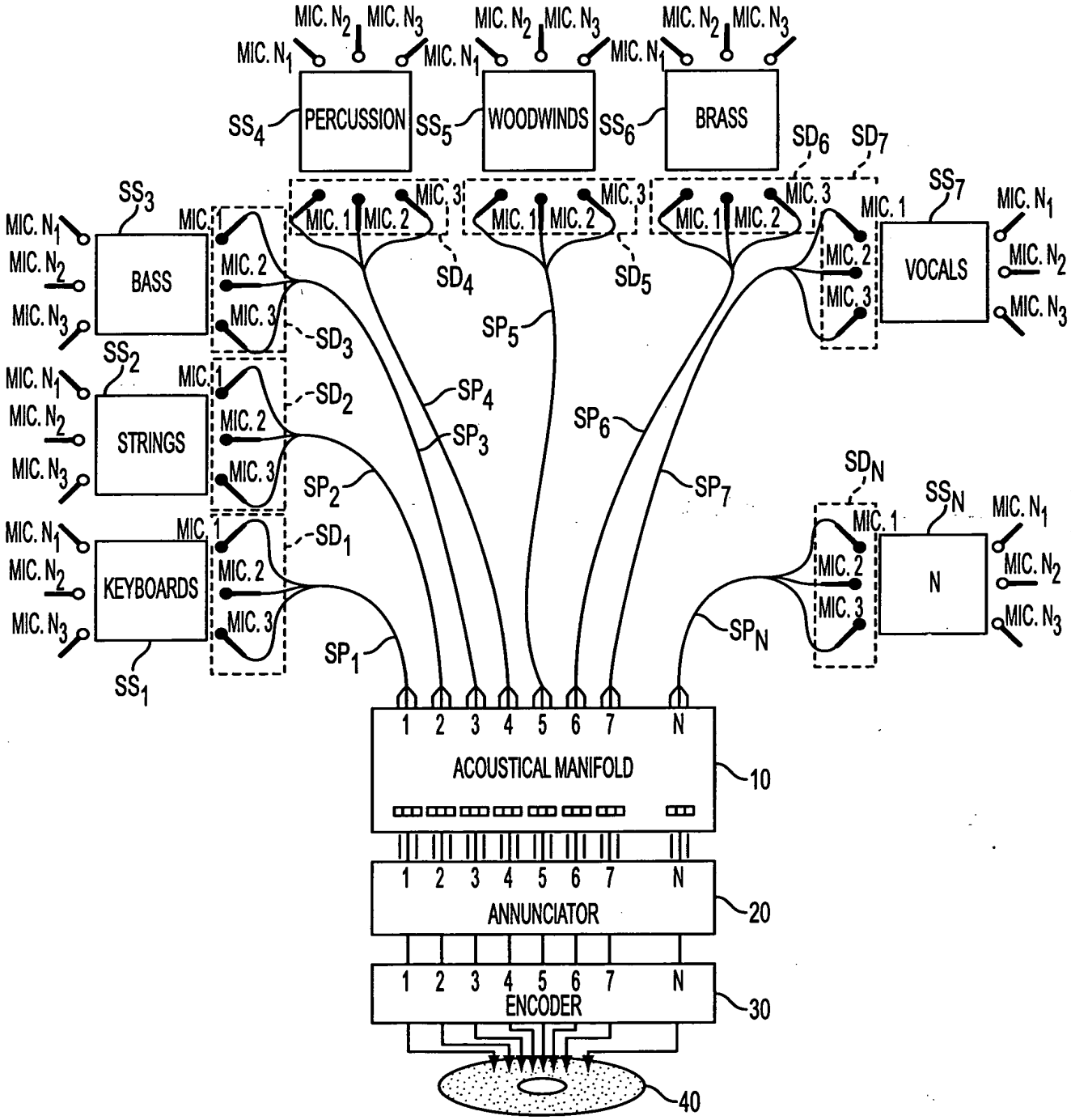


FIG. 1

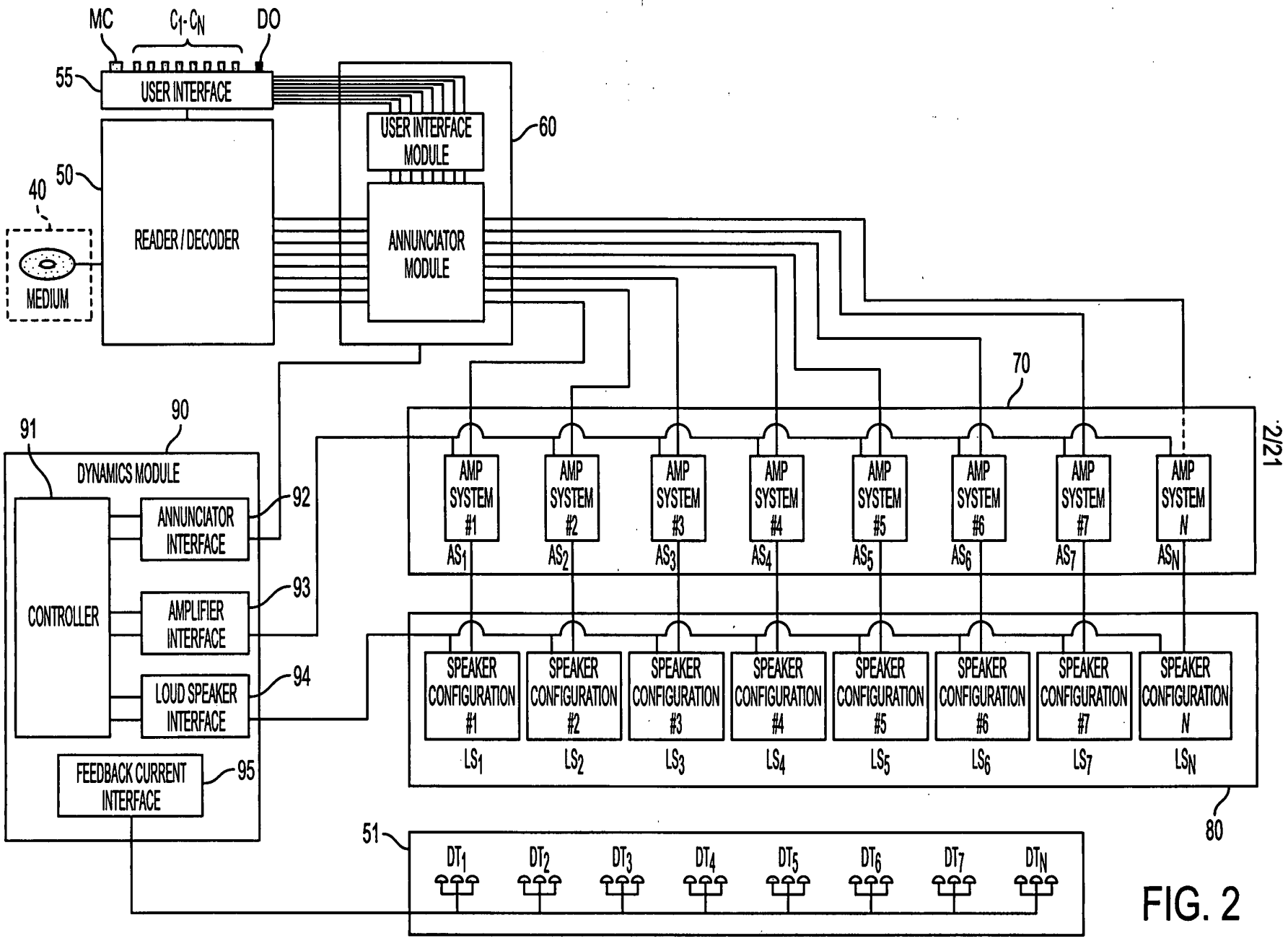

MC
C1-CN
DO
55
USER INTERFACE
50
READER / DECODER
40
MEDIUM
USER INTERFACE MODULE
60
ANNUNCIATOR MODULE
70
90
91
DYNAMICS MODULE
CONTROLLER
ANNUNCIATOR INTERFACE
92
AMPLIFIER INTERFACE
93
LOUD SPEAKER INTERFACE
94
FEEDBACK CURRENT INTERFACE
95
AMP SYSTEM #1
AMP SYSTEM #2
AMP SYSTEM #3
AMP SYSTEM #4
AMP SYSTEM #5
AMP SYSTEM #6
AMP SYSTEM #7
AMP SYSTEM N
AS1
AS2
AS3
AS4
AS5
AS6
AS7
ASN
SPEAKER CONFIGURATION #1
SPEAKER CONFIGURATION #2
SPEAKER CONFIGURATION #3
SPEAKER CONFIGURATION #4
SPEAKER CONFIGURATION #5
SPEAKER CONFIGURATION #6
SPEAKER CONFIGURATION #7
SPEAKER CONFIGURATION N
LS1
LS2
LS3
LS4
LS5
LS6
LS7
LSN
80
51
DT1
DT2
DT3
DT4
DT5
DT6
DT7
DTN

FIG. 2

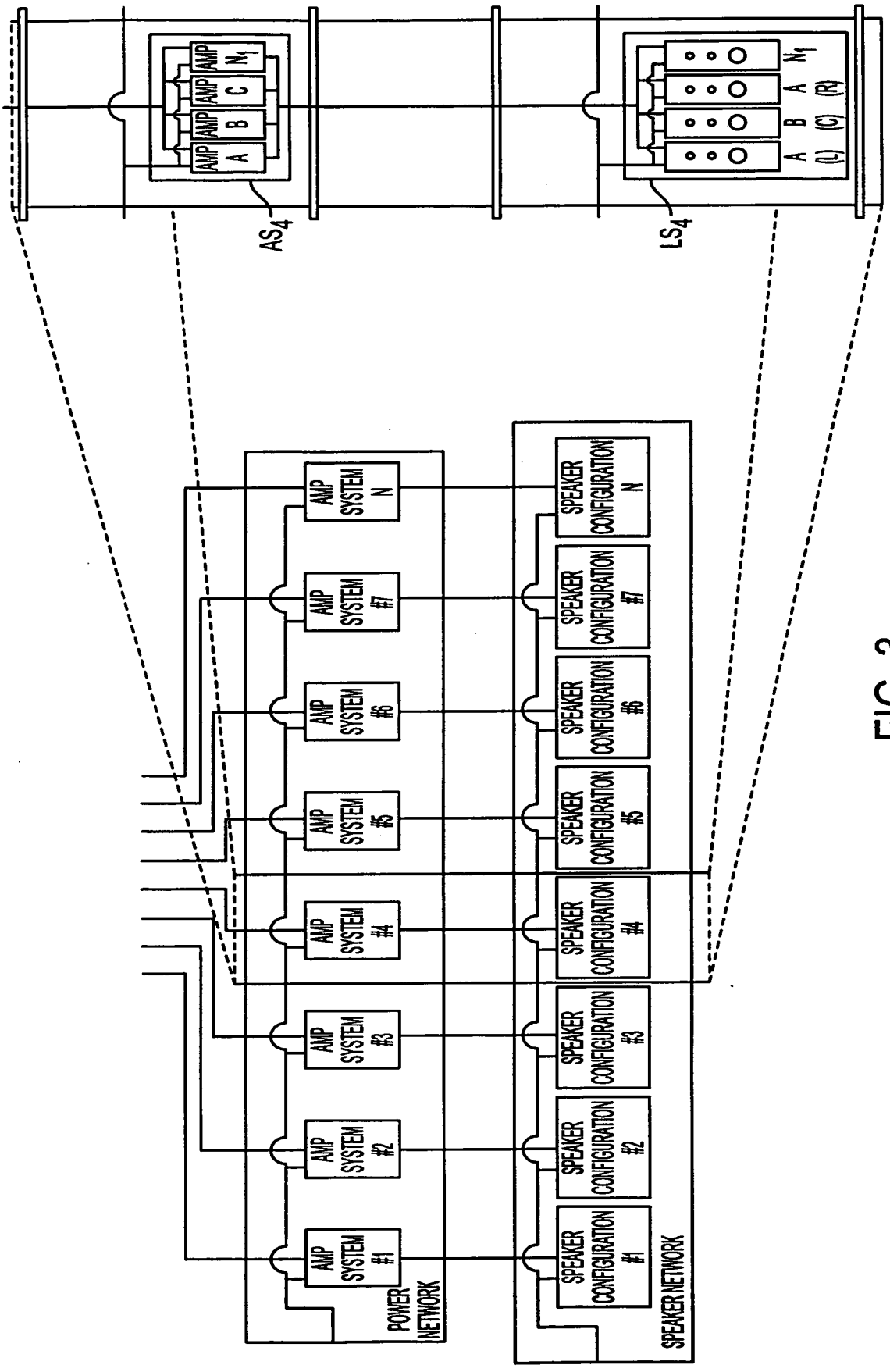

AMP
A
AMP
B
AMP
C
AMP
N_1
AS_4
A
B
A
N_1
(L)
(C)
(R)
LS_4
AMP SYSTEM #1
AMP SYSTEM #2
AMP SYSTEM #3
AMP SYSTEM #4
AMP SYSTEM #5
AMP SYSTEM #6
AMP SYSTEM #7
AMP SYSTEM N
POWER NETWORK
SPEAKER CONFIGURATION #1
SPEAKER CONFIGURATION #2
SPEAKER CONFIGURATION #3
SPEAKER CONFIGURATION #4
SPEAKER CONFIGURATION #5
SPEAKER CONFIGURATION #6
SPEAKER CONFIGURATION #7
SPEAKER CONFIGURATION N
SPEAKER NETWORK

FIG. 3

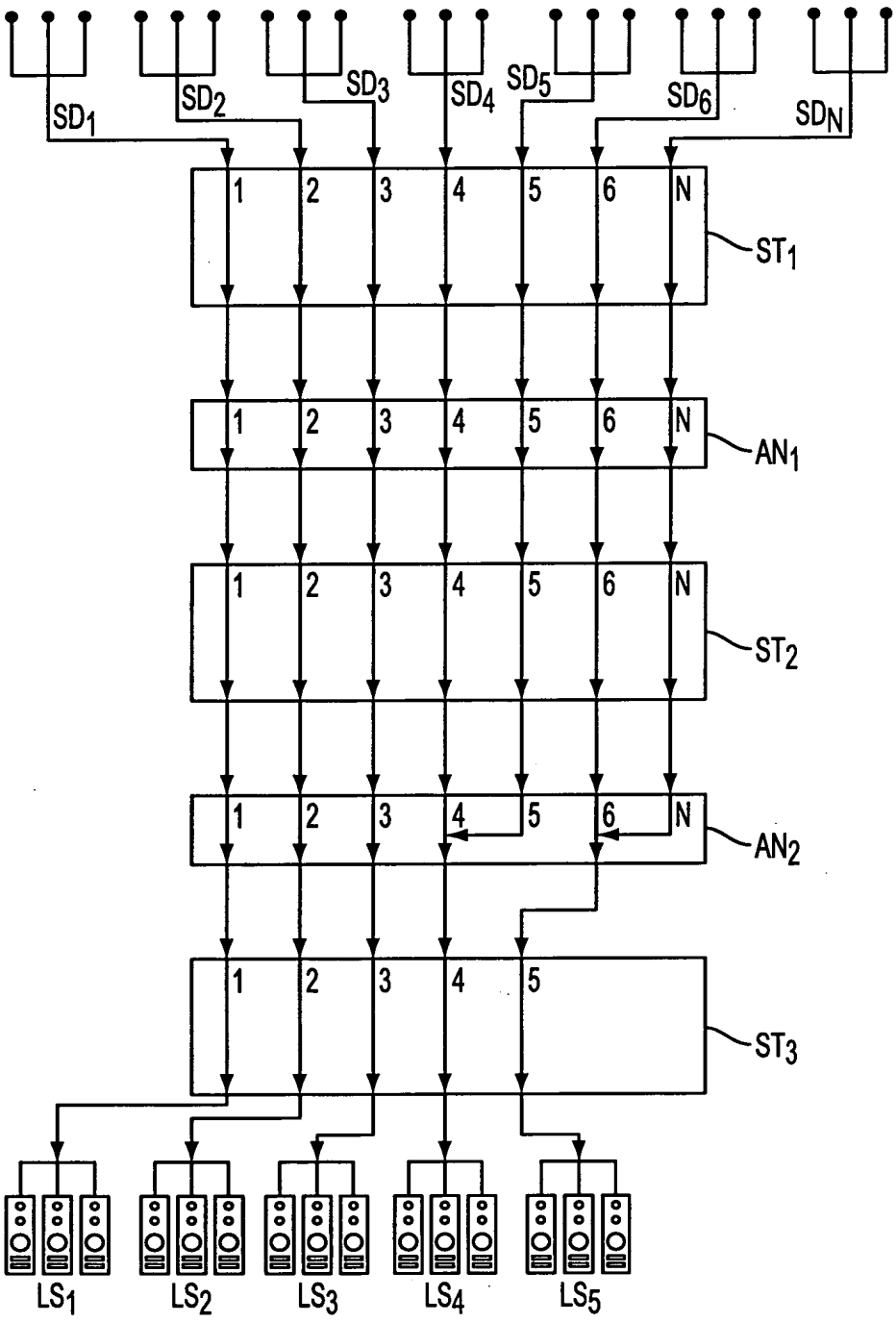

SD1
SD2
SD3
SD4
SD5
SD6
SDN
1
2
3
4
5
6
N
ST1
AN1
ST2
AN2
ST3
LS1
LS2
LS3
LS4
LS5

FIG. 4

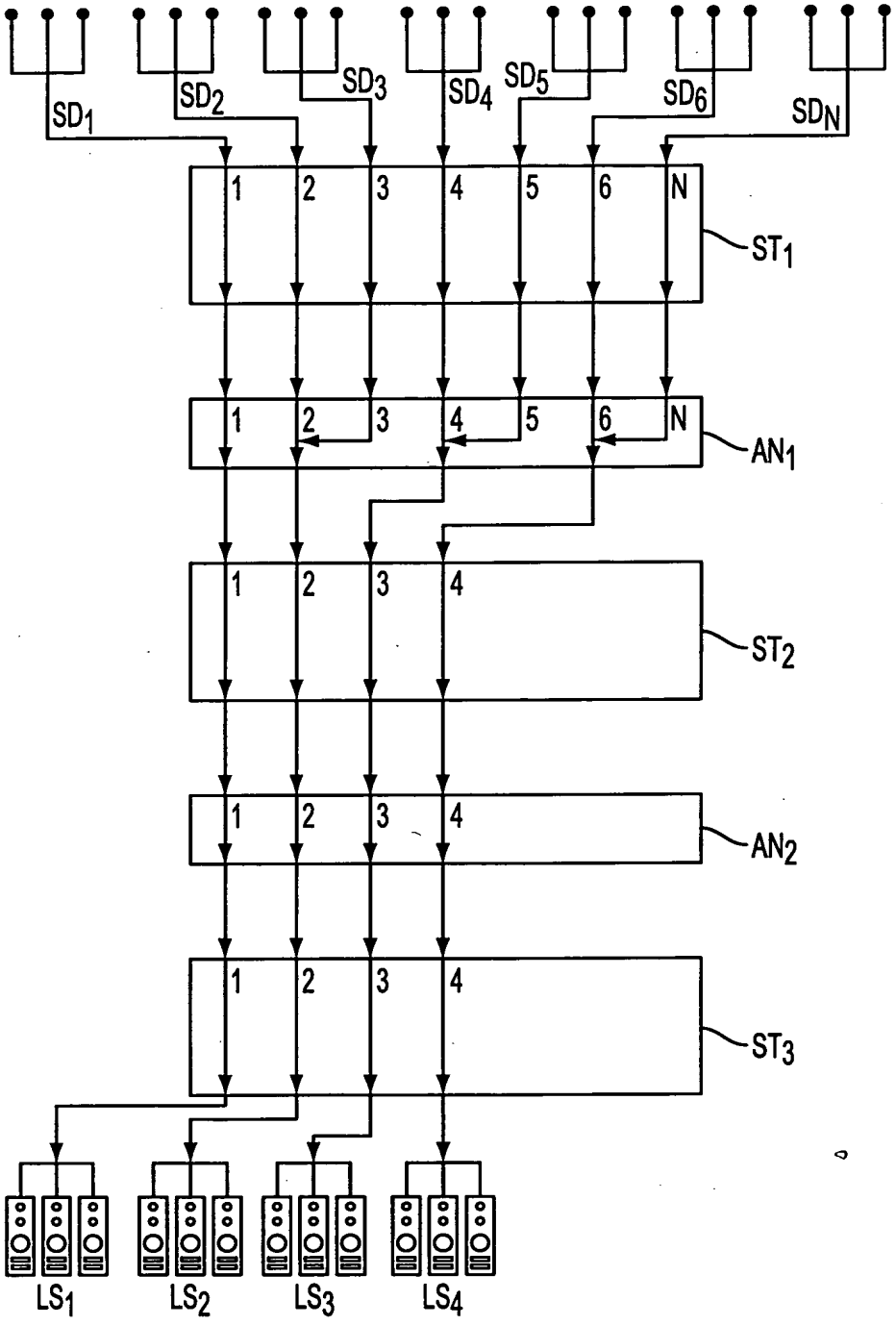

SD1
SD2
SD3
SD4
SD5
SD6
SDN
1
2
3
4
5
6
N
ST1
AN1
ST2
AN2
ST3
LS1
LS2
LS3
LS4

FIG. 5

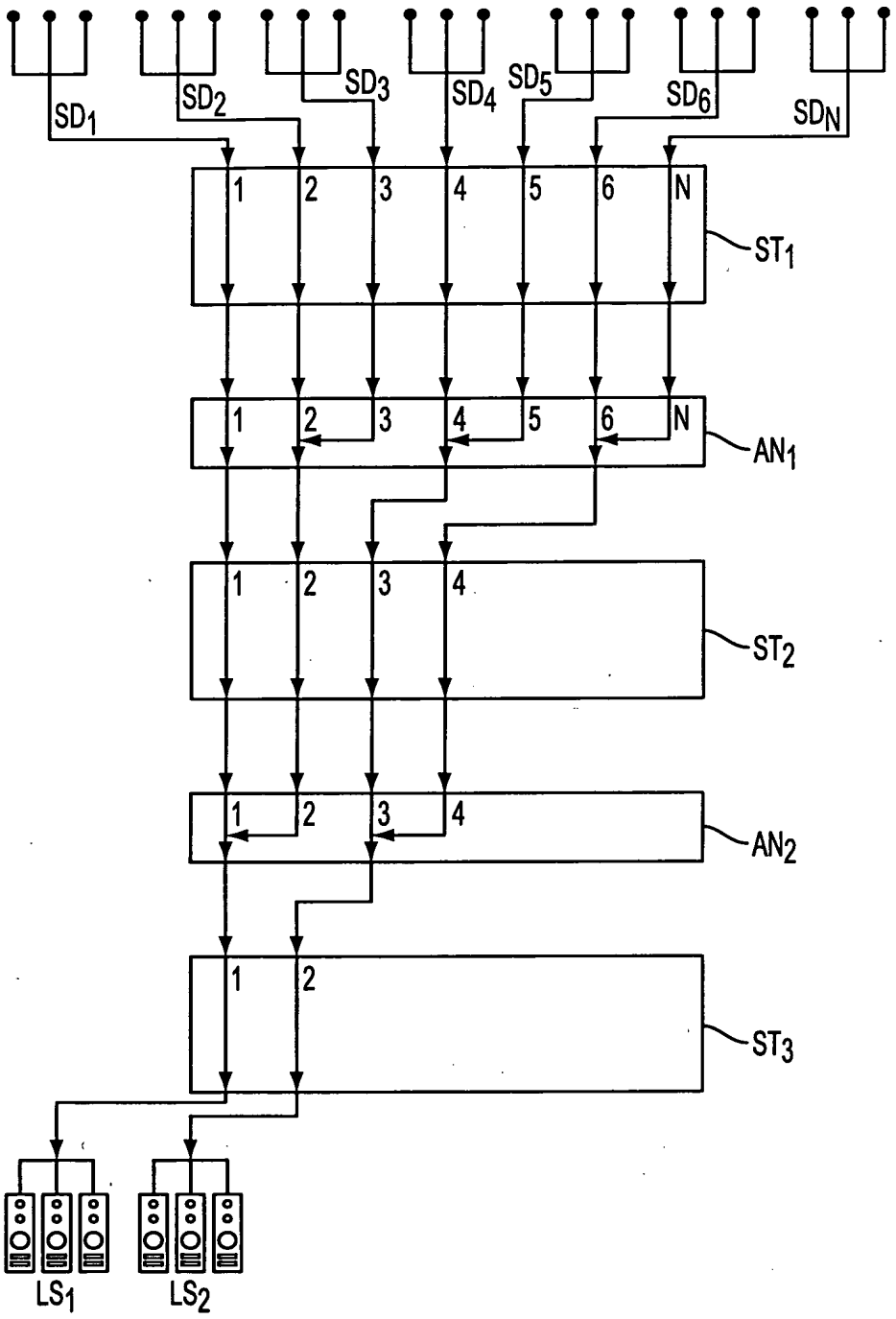


FIG. 6

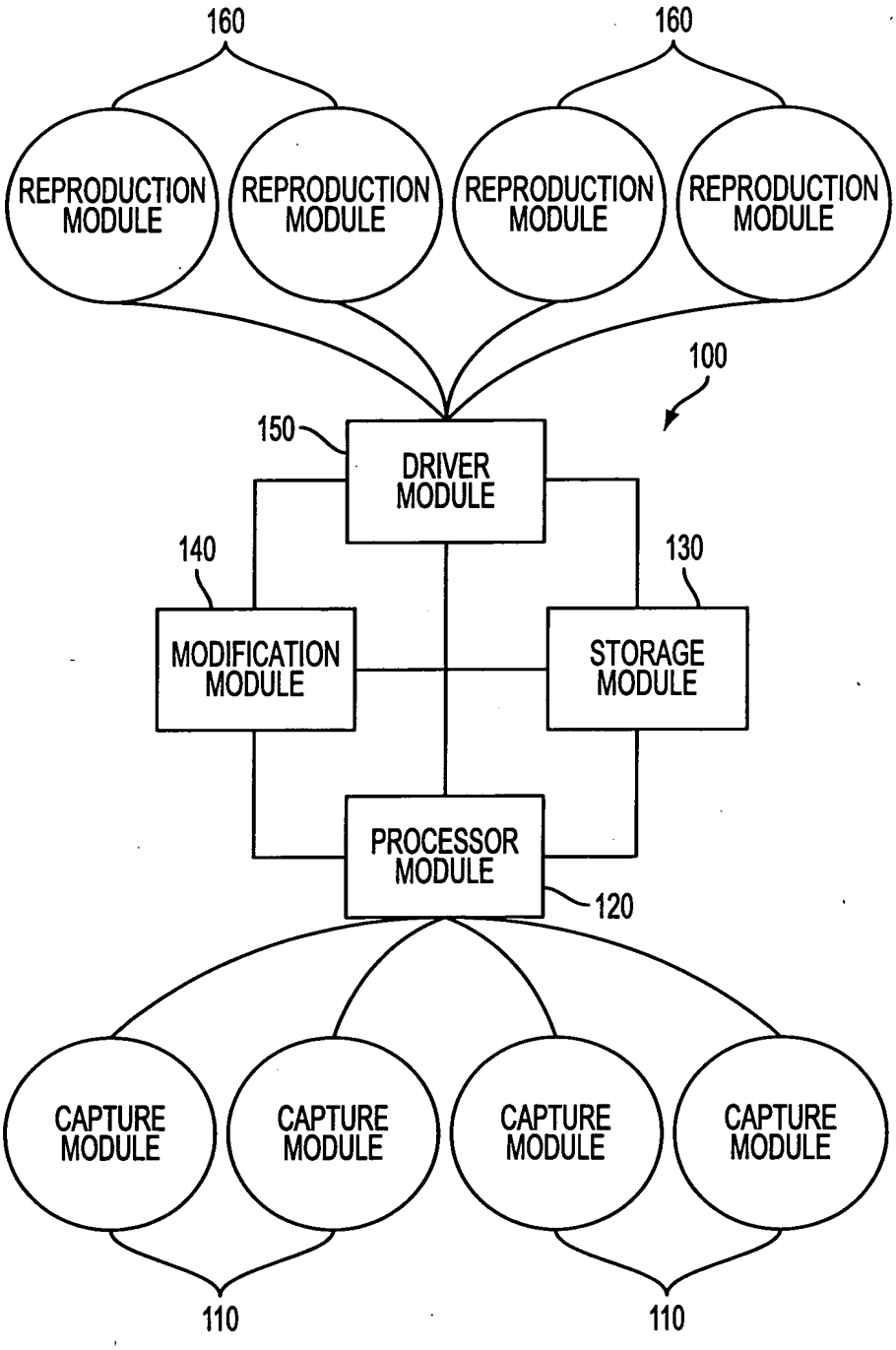

160
160
REPRODUCTION MODULE
REPRODUCTION MODULE
REPRODUCTION MODULE
REPRODUCTION MODULE
100
150
DRIVER MODULE
140
130
MODIFICATION MODULE
STORAGE MODULE
PROCESSOR MODULE
120
CAPTURE MODULE
CAPTURE MODULE
CAPTURE MODULE
CAPTURE MODULE
110
110

FIG. 7

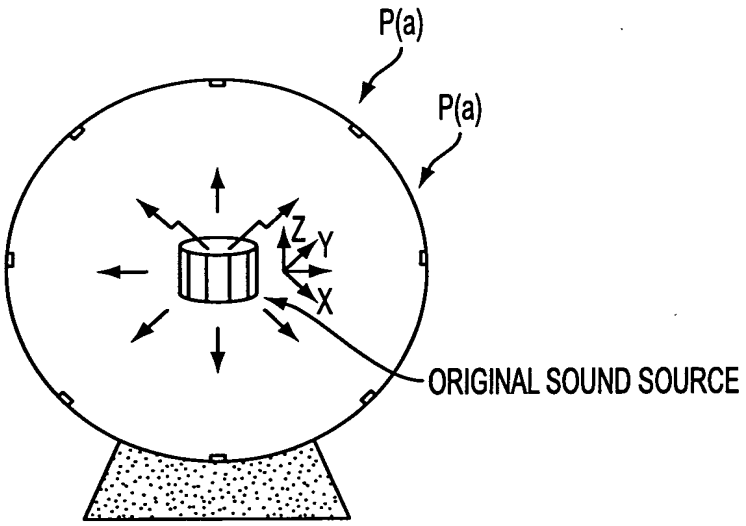

P(a)
P(a)
Z
Y
X
ORIGINAL SOUND SOURCE

FIG. 8

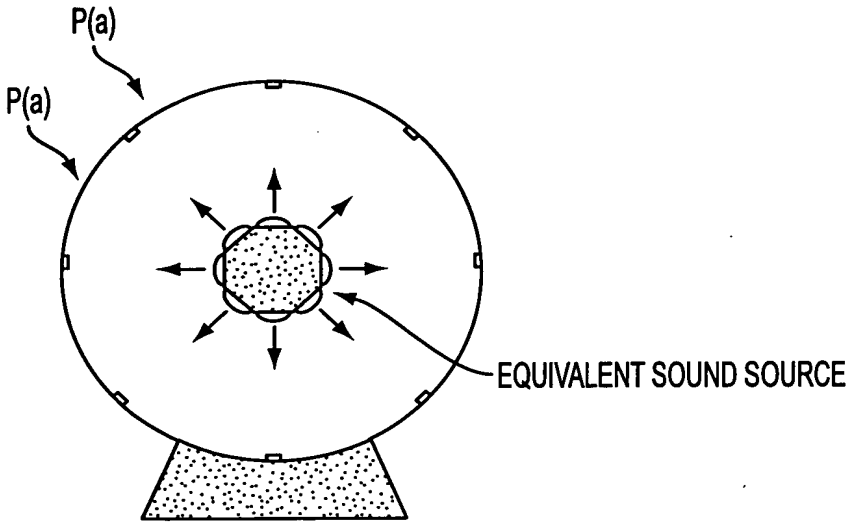

P(a)
P(a)
EQUIVALENT SOUND SOURCE

FIG. 9

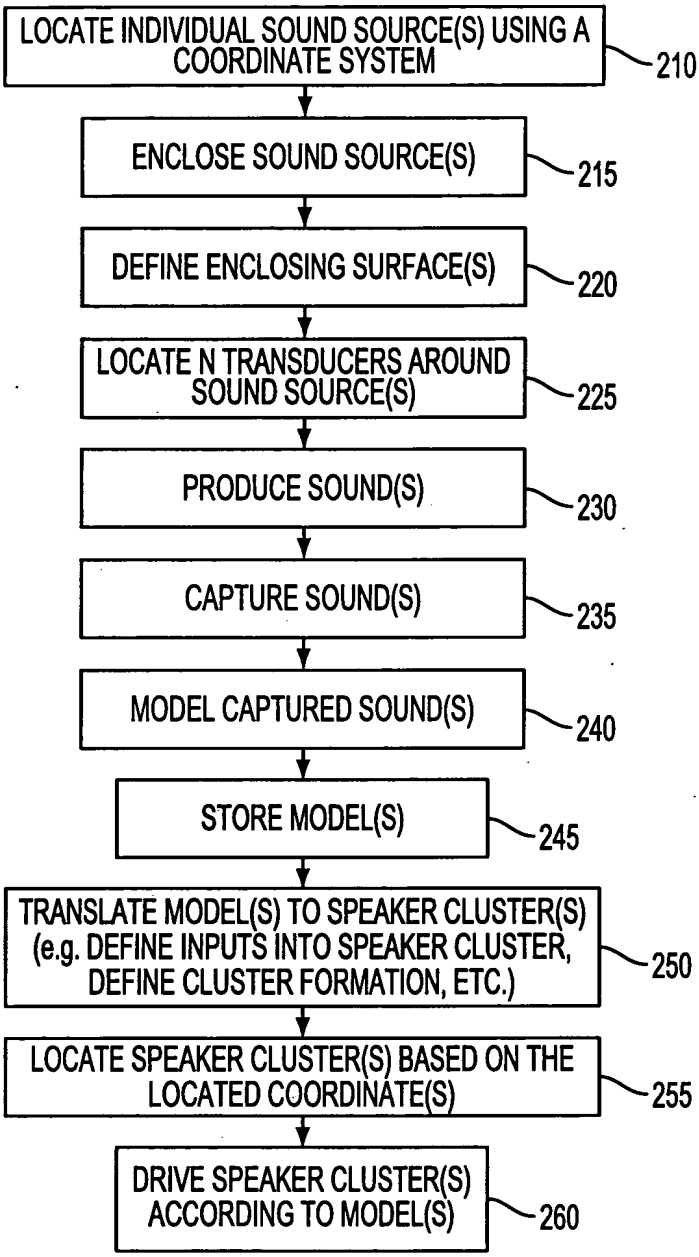

LOCATE INDIVIDUAL SOUND SOURCE(S) USING A COORDINATE SYSTEM
210
ENCLOSE SOUND SOURCE(S)
215
DEFINE ENCLOSING SURFACE(S)
220
LOCATE N TRANSDUCERS AROUND SOUND SOURCE(S)
225
PRODUCE SOUND(S)
230
CAPTURE SOUND(S)
235
MODEL CAPTURED SOUND(S)
240
STORE MODEL(S)
245
TRANSLATE MODEL(S) TO SPEAKER CLUSTER(S) (e.g. DEFINE INPUTS INTO SPEAKER CLUSTER, DEFINE CLUSTER FORMATION, ETC.)
250
LOCATE SPEAKER CLUSTER(S) BASED ON THE LOCATED COORDINATE(S)
255
DRIVE SPEAKER CLUSTER(S) ACCORDING TO MODEL(S)
260

FIG. 10

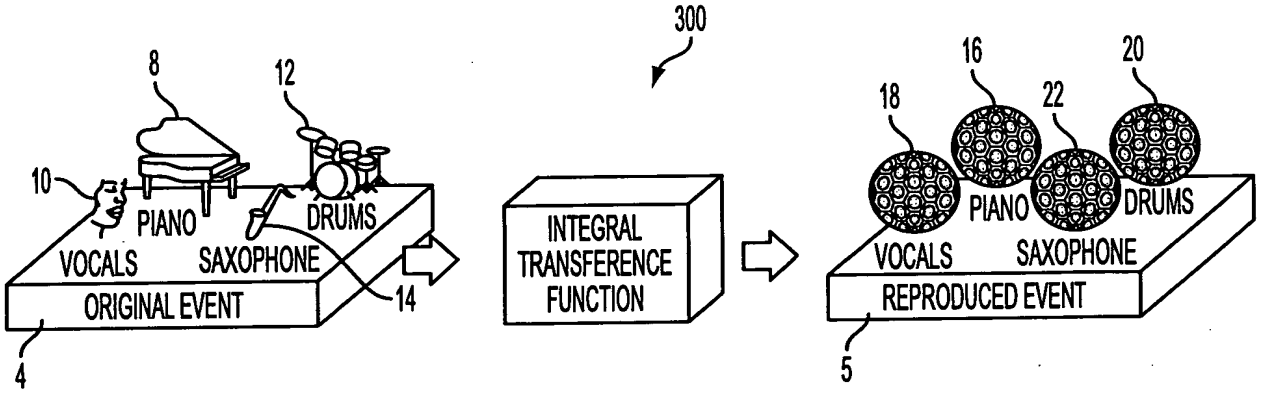


FIG. 11A

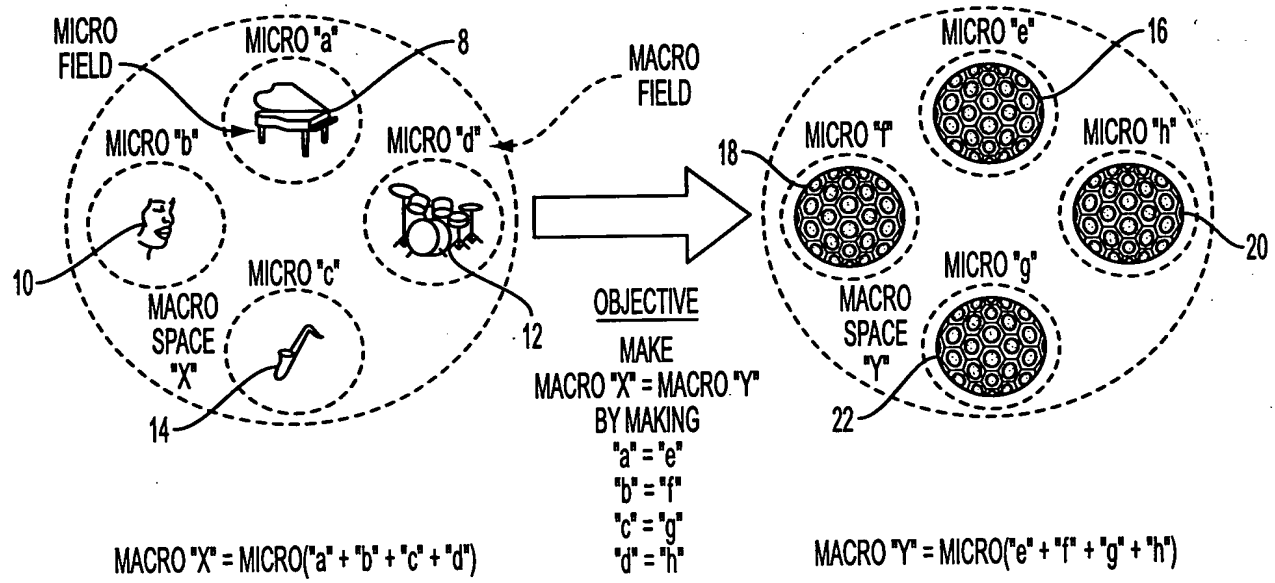


FIG. 11B

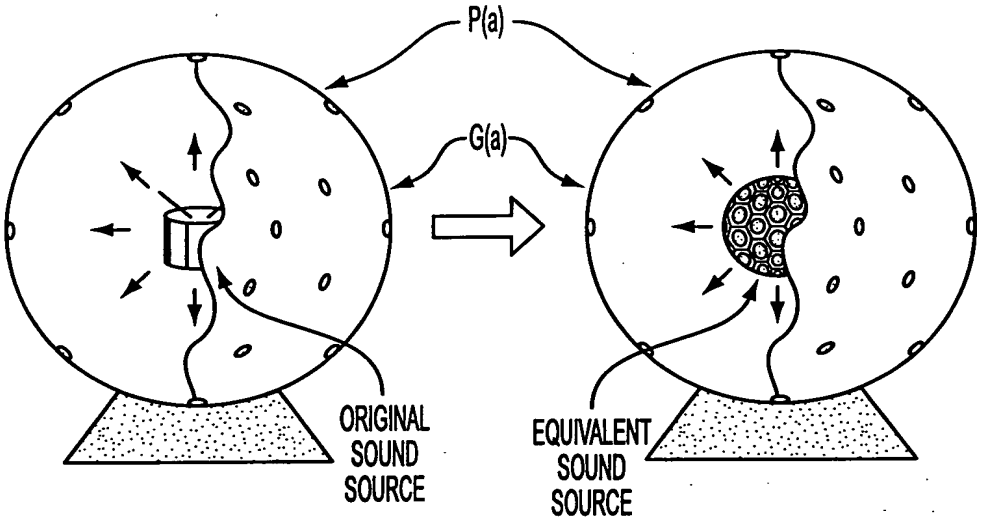


FIG. 12A

EXT EVENT	EXT CAPTURE	EXT SYNTHESIS	EXT REPRODUCTION
ORIGINAL SOUND EVENT CONTINUOUS INTEGRAL WAVE	DISCRETE NODAL CAPTURE SEGMENTED DISTRIBUTIVE WAVE	INVERSE DISTRIBUTIVE WAVE COMPUTATIONS	DISTRIBUTIVE WAVE PRODUCTION INTEGRAL WAVE REPRODUCTION
ANALOG DOMAIN	ANALOG CAPTURE ANALOG→DIGITAL CONVERSION	DIGITAL DOMAIN	DIGITAL→ANALOG CONVERSION

FIG. 12B

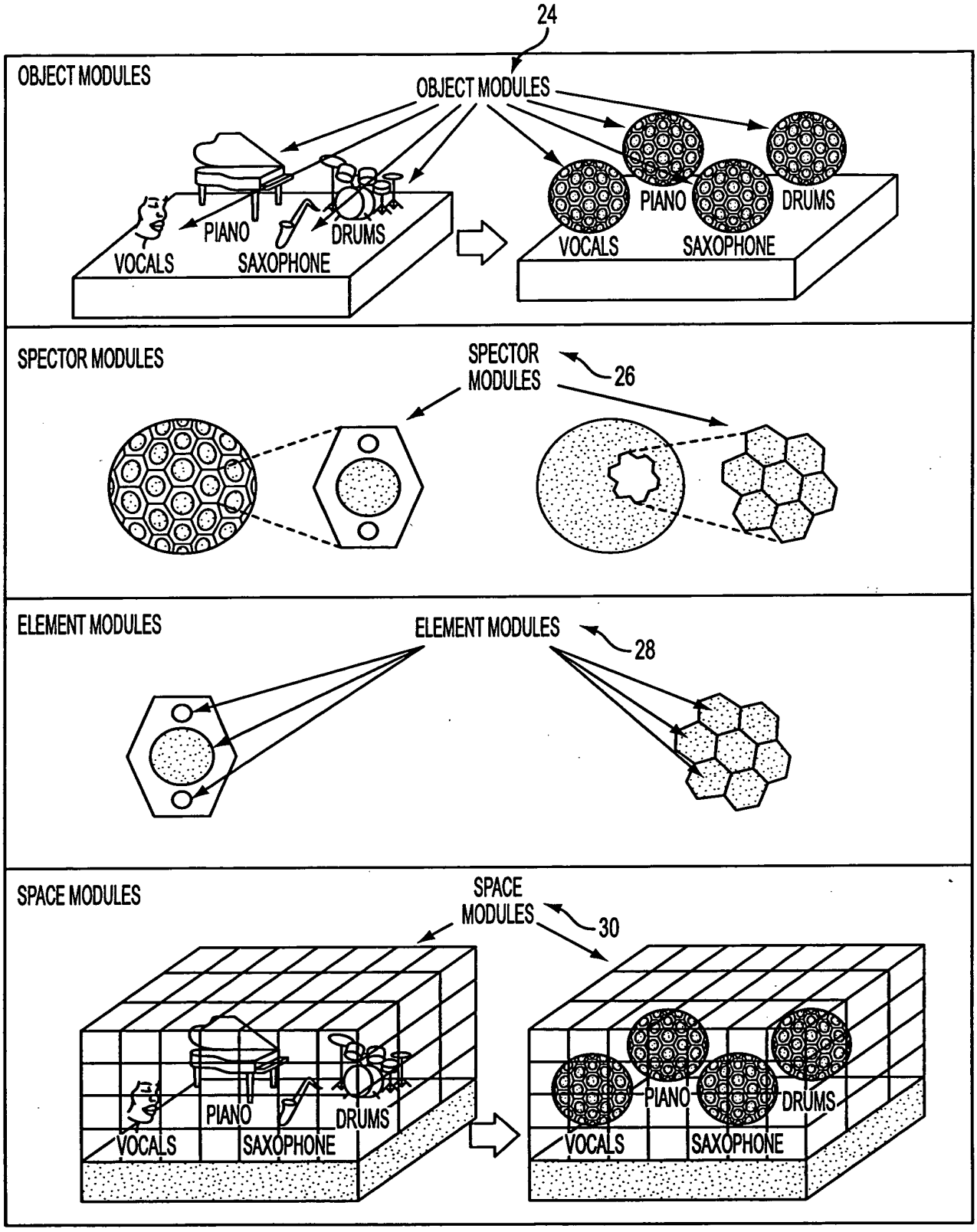

24
OBJECT MODULES
OBJECT MODULES
PIANO
DRUMS
VOCALS
SAXOPHONE
PIANO
DRUMS
VOCALS
SAXOPHONE
SPECTOR MODULES
SPECTOR MODULES
26
ELEMENT MODULES
ELEMENT MODULES
28
SPACE MODULES
SPACE MODULES
30
PIANO
DRUMS
VOCALS
SAXOPHONE
PIANO
DRUMS
VOCALS
SAXOPHONE

FIG. 13

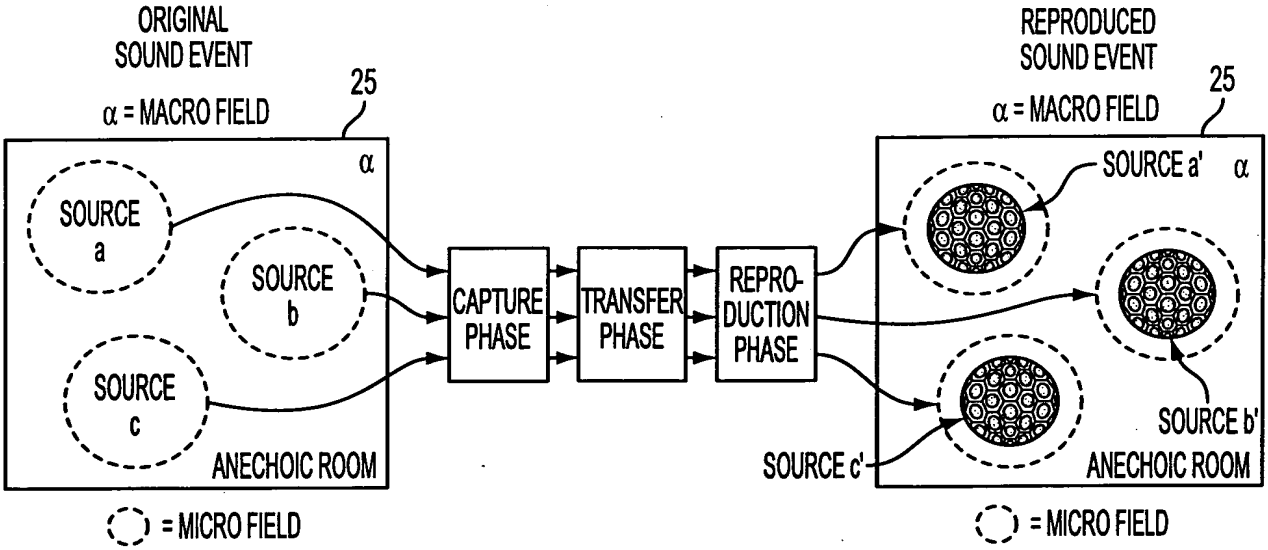

ORIGINAL
SOUND EVENT
α = MACRO FIELD
25
α
SOURCE a
SOURCE b
SOURCE c
ANECHOIC ROOM
= MICRO FIELD
CAPTURE PHASE
TRANSFER PHASE
REPRO-DUCTION PHASE
REPRODUCED
SOUND EVENT
α = MACRO FIELD
25
SOURCE a'
α
SOURCE b'
SOURCE c'
ANECHOIC ROOM
= MICRO FIELD

FIG. 14

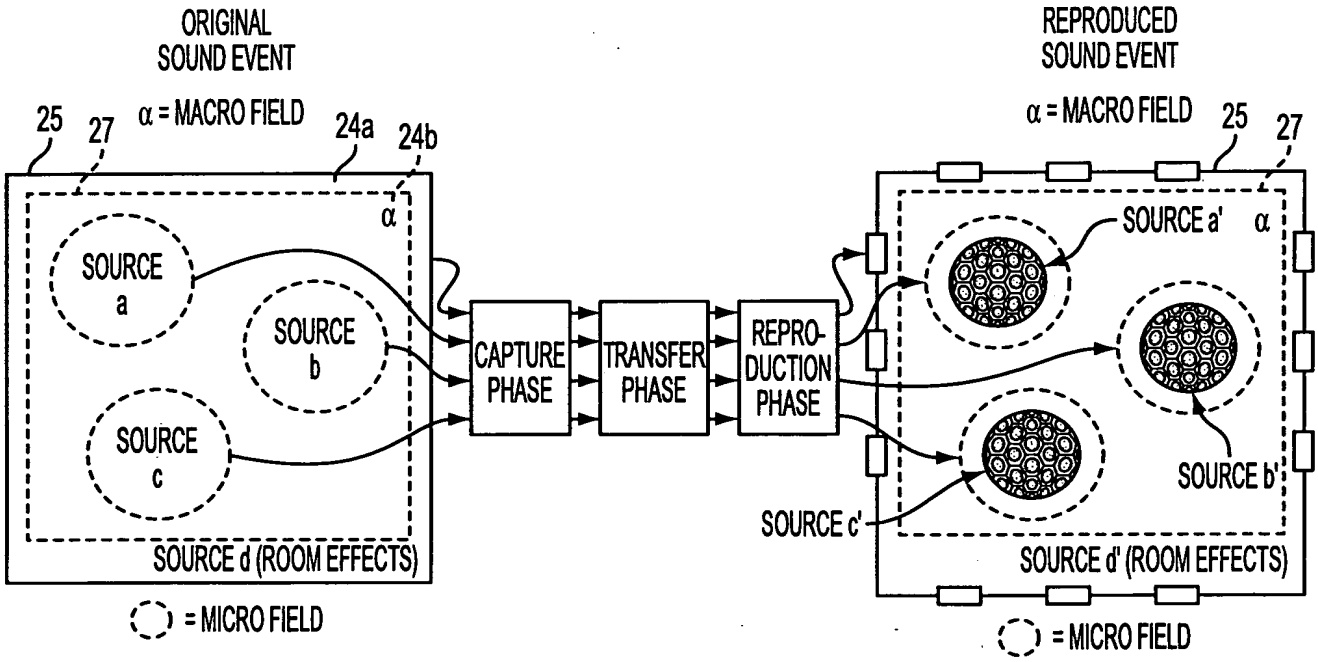

ORIGINAL
SOUND EVENT
α = MACRO FIELD
25
27
24a
24b
α
SOURCE a
SOURCE b
SOURCE c
SOURCE d (ROOM EFFECTS)
= MICRO FIELD
CAPTURE PHASE
TRANSFER PHASE
REPRO-DUCTION PHASE
REPRODUCED
SOUND EVENT
α = MACRO FIELD
25
27
SOURCE a'
α
SOURCE b'
SOURCE c'
SOURCE d' (ROOM EFFECTS)
= MICRO FIELD

FIG. 15

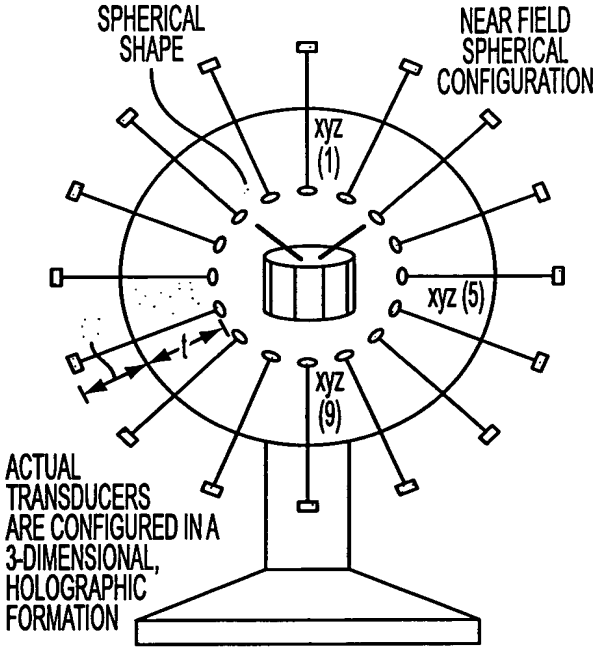


FIG. 16A

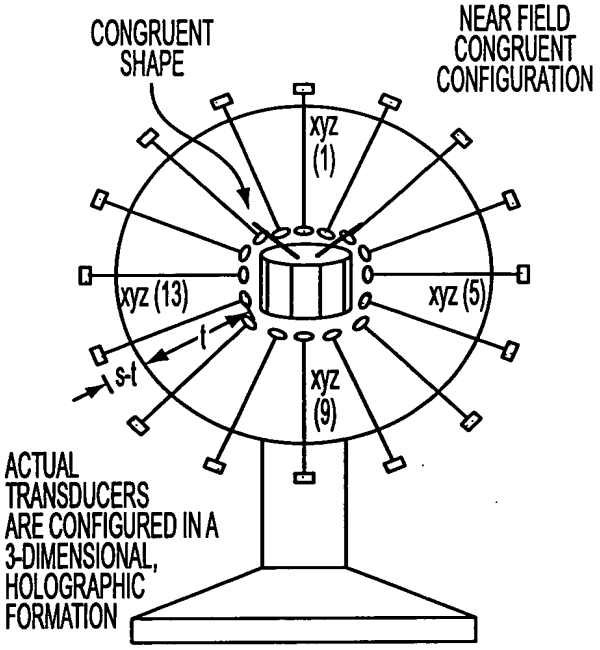


FIG. 16B

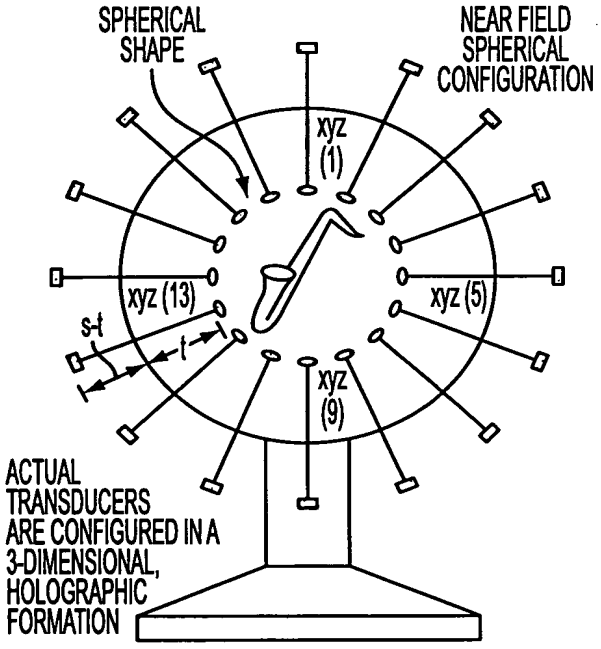


FIG. 16C

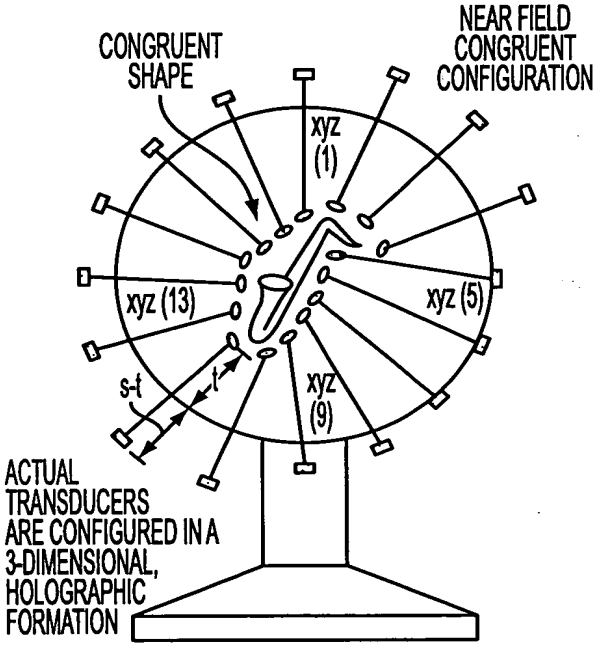


FIG. 16D

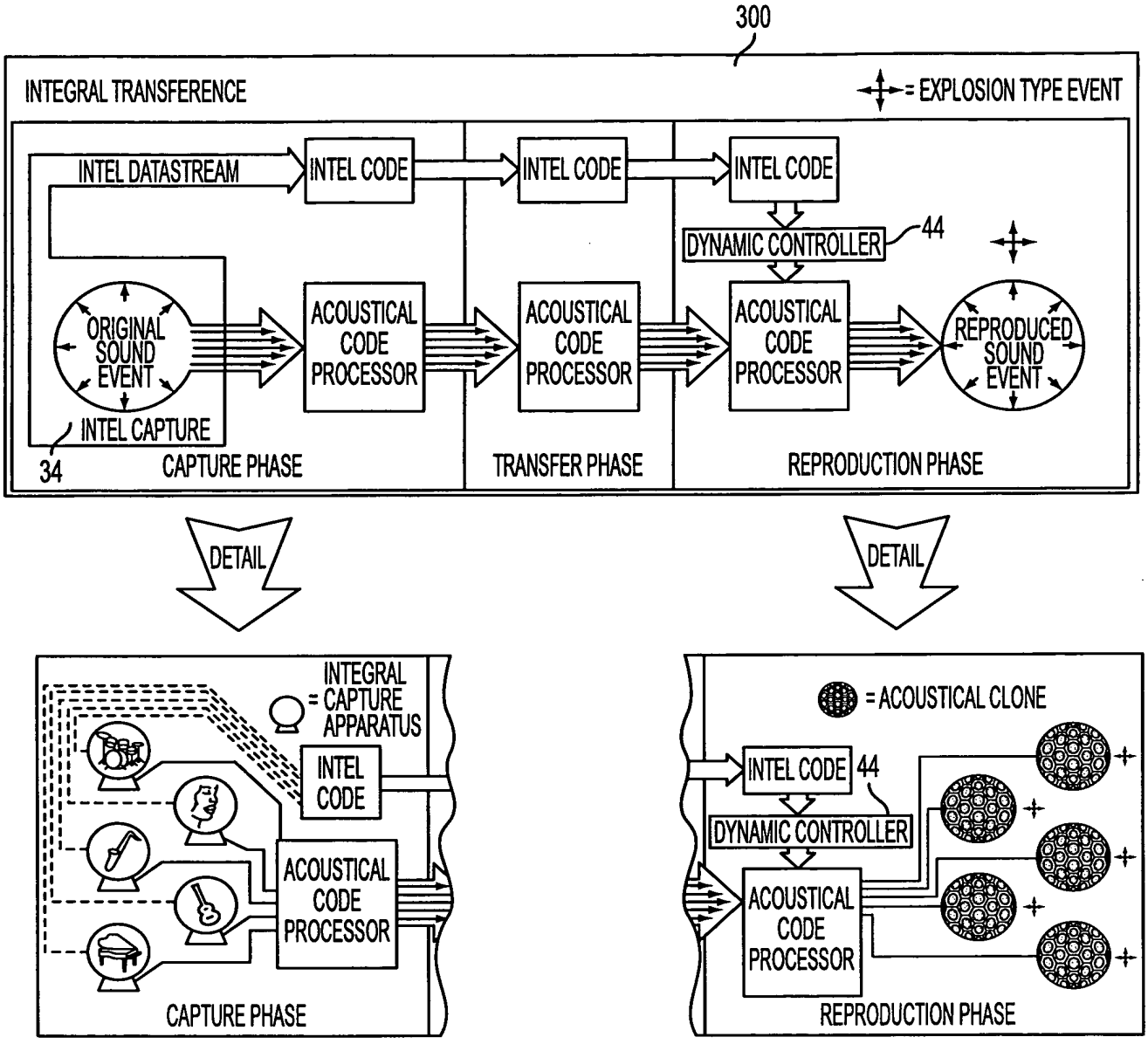

300
INTEGRAL TRANSFERENCE
= EXPLOSION TYPE EVENT
INTEL DATASTREAM
INTEL CODE
INTEL CODE
INTEL CODE
DYNAMIC CONTROLLER
44
ORIGINAL SOUND EVENT
ACOUSTICAL CODE PROCESSOR
ACOUSTICAL CODE PROCESSOR
ACOUSTICAL CODE PROCESSOR
REPRODUCED SOUND EVENT
INTEL CAPTURE
34
CAPTURE PHASE
TRANSFER PHASE
REPRODUCTION PHASE
DETAIL
DETAIL
INTEGRAL = CAPTURE APPARATUS
INTEL CODE
ACOUSTICAL CODE PROCESSOR
CAPTURE PHASE
= ACOUSTICAL CLONE
INTEL CODE
44
DYNAMIC CONTROLLER
ACOUSTICAL CODE PROCESSOR
REPRODUCTION PHASE

FIG. 17

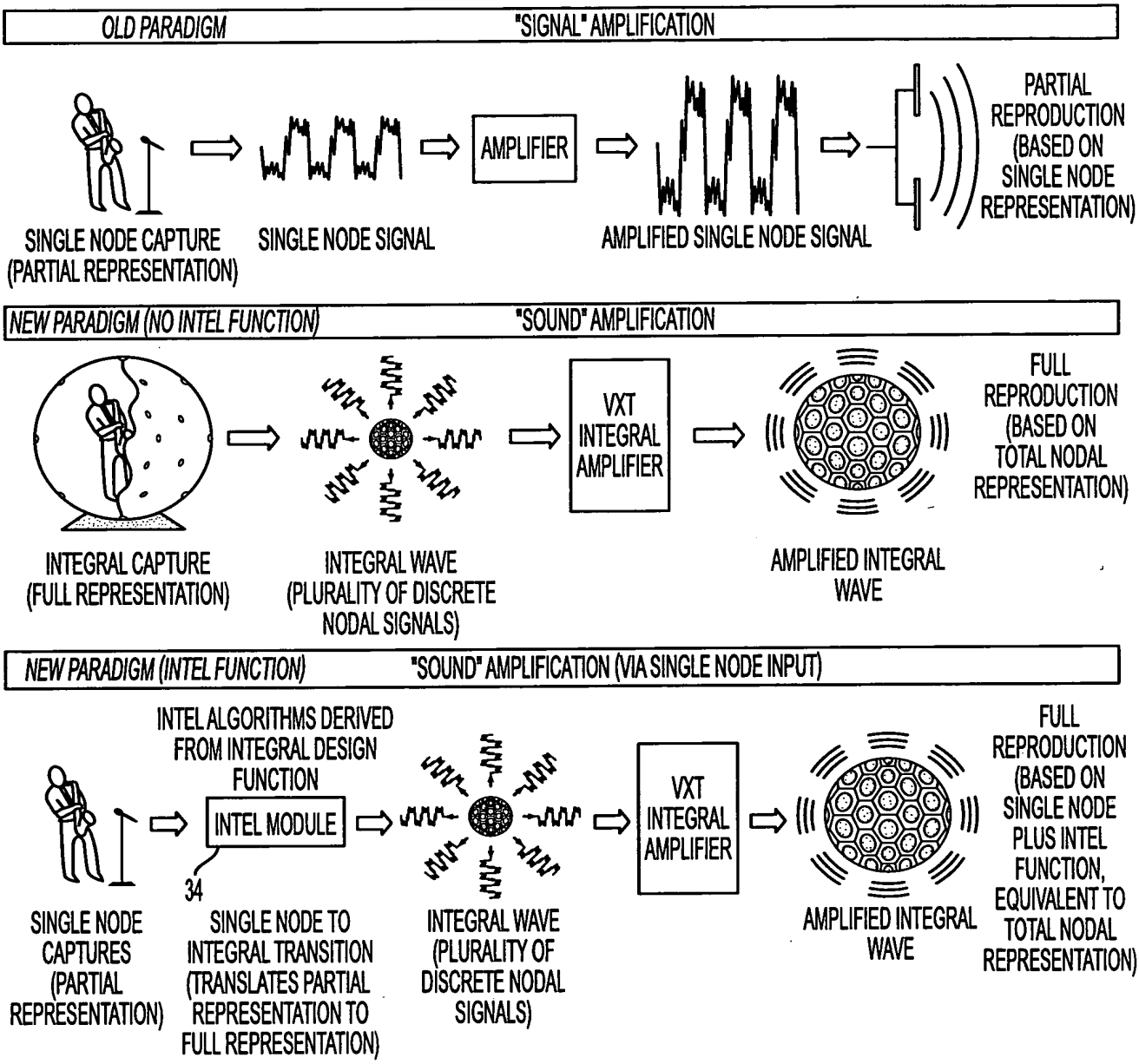

OLD PARADIGM
"SIGNAL" AMPLIFICATION
AMPLIFIER
PARTIAL REPRODUCTION (BASED ON SINGLE NODE REPRESENTATION)
SINGLE NODE CAPTURE (PARTIAL REPRESENTATION)
SINGLE NODE SIGNAL
AMPLIFIED SINGLE NODE SIGNAL
NEW PARADIGM (NO INTEL FUNCTION)
"SOUND" AMPLIFICATION
VXT INTEGRAL AMPLIFIER
FULL REPRODUCTION (BASED ON TOTAL NODAL REPRESENTATION)
INTEGRAL CAPTURE (FULL REPRESENTATION)
INTEGRAL WAVE (PLURALITY OF DISCRETE NODAL SIGNALS)
AMPLIFIED INTEGRAL WAVE
NEW PARADIGM (INTEL FUNCTION)
"SOUND" AMPLIFICATION (VIA SINGLE NODE INPUT)
INTEL ALGORITHMS DERIVED FROM INTEGRAL DESIGN FUNCTION
INTEL MODULE
34
VXT INTEGRAL AMPLIFIER
FULL REPRODUCTION (BASED ON SINGLE NODE PLUS INTEL FUNCTION, EQUIVALENT TO TOTAL NODAL REPRESENTATION)
SINGLE NODE CAPTURES (PARTIAL REPRESENTATION)
SINGLE NODE TO INTEGRAL TRANSITION (TRANSLATES PARTIAL REPRESENTATION TO FULL REPRESENTATION)
INTEGRAL WAVE (PLURALITY OF DISCRETE NODAL SIGNALS)
AMPLIFIED INTEGRAL WAVE

FIG. 18A

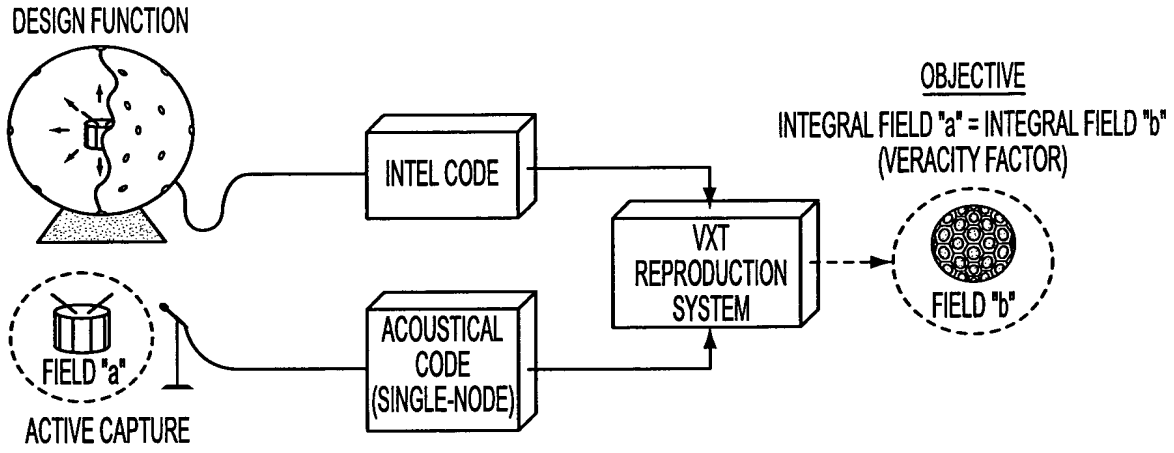

DESIGN FUNCTION
INTEL CODE
OBJECTIVE
INTEGRAL FIELD "a" = INTEGRAL FIELD "b"
(VERACITY FACTOR)
VXT
REPRODUCTION
SYSTEM
FIELD "b"
FIELD "a"
ACOUSTICAL
CODE
(SINGLE-NODE)
ACTIVE CAPTURE

FIG. 18B

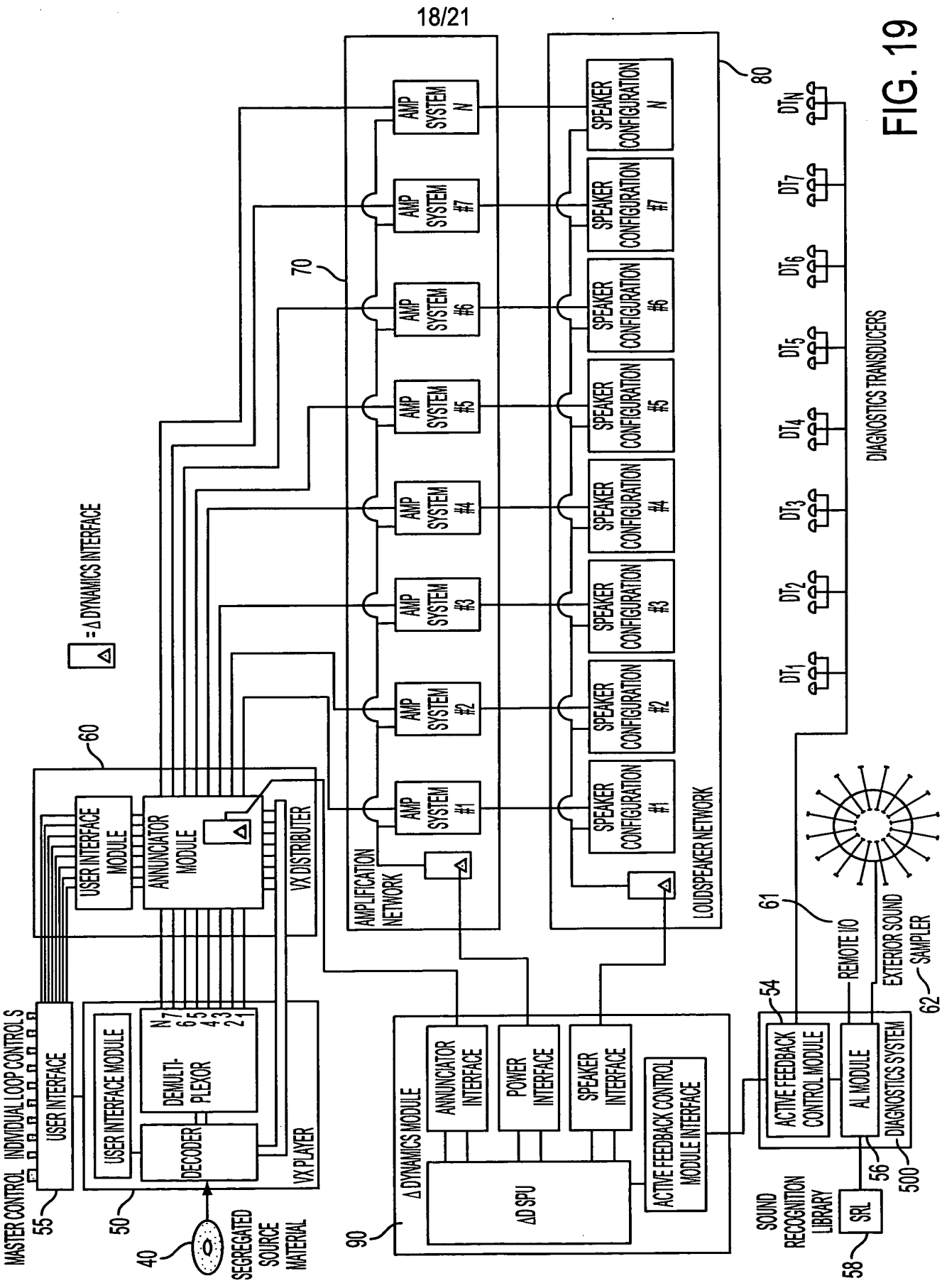

MASTER CONTROL
INDIVIDUAL LOOP CONTROLS
USER INTERFACE
55
USER INTERFACE MODULE
DECODER
DEMULTI-PLEXOR
N 7 6 5 4 3 2 1
50
40
SEGREGATED SOURCE MATERIAL
VX PLAYER
VX DISTRIBUTER
USER INTERFACE MODULE
ANNUNCIATOR MODULE
60
= Δ DYNAMICS INTERFACE
AMP SYSTEM #1
AMP SYSTEM #2
AMP SYSTEM #3
AMP SYSTEM #4
AMP SYSTEM #5
AMP SYSTEM #6
AMP SYSTEM #7
AMP SYSTEM N
70
AMPLIFICATION NETWORK
SPEAKER CONFIGURATION #1
SPEAKER CONFIGURATION #2
SPEAKER CONFIGURATION #3
SPEAKER CONFIGURATION #4
SPEAKER CONFIGURATION #5
SPEAKER CONFIGURATION #6
SPEAKER CONFIGURATION #7
SPEAKER CONFIGURATION N
LOUDSPEAKER NETWORK
80
DT1
DT2
DT3
DT4
DT5
DT6
DT7
DTN
DIAGNOSTICS TRANSDUCERS
61
REMOTE I/O
EXTERIOR SOUND SAMPLER
62
54
Δ DYNAMICS MODULE
ANNUNCIATOR INTERFACE
POWER INTERFACE
SPEAKER INTERFACE
ACTIVE FEEDBACK CONTROL MODULE INTERFACE
Δ D SPU
90
ACTIVE FEEDBACK CONTROL MODULE
AL MODULE
DIAGNOSTICS SYSTEM
56
500
SOUND RECOGNITION LIBRARY
SRL
58

FIG. 19

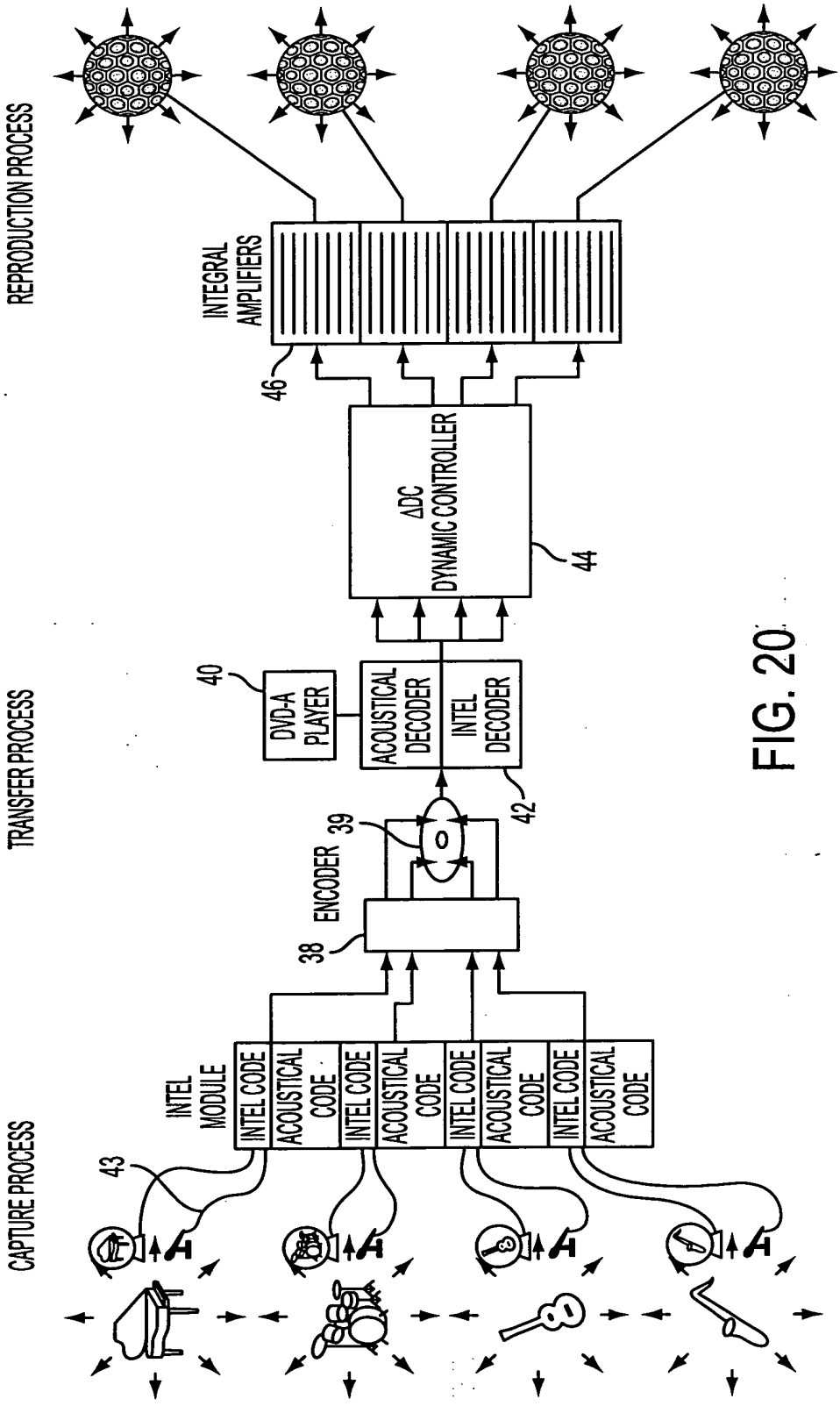

CAPTURE PROCESS
TRANSFER PROCESS
REPRODUCTION PROCESS
INTEL MODULE
INTEL CODE
ACOUSTICAL CODE
43
ENCODER
38
39
INTEL DECODER
ACOUSTICAL DECODER
42
DVD-A PLAYER
40
ΔDC DYNAMIC CONTROLLER
44
INTEGRAL AMPLIFIERS
46

FIG. 20

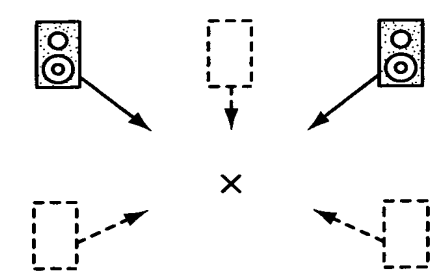
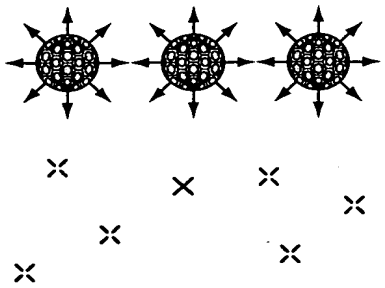
CONVERGENT WAVE FIELD SYNTHESIS (CWFS)	DIVERGENT WAVE FIELD SYNTHESIS (DWFS)
 — = STEREO -+- = SURROUND SOUND × = LISTENER'S POSITION	 × = PRIMARY LISTENING POSITION × = ALTERNATE LISTENING POSITIONS
RECEIVER ORIENTED (WAVE FIELD CONVERGES ON RECEIVER)	SOURCE ORIENTED (WAVE FIELD DIVERGES FROM SOURCES)
STATIONARY PERSPECTIVE (SWEET SPOT)	MOVABLE PERSPECTIVE (NO SWEET SPOT)
STEREO OR SURROUND (PER EVENT)	MONO (PER DISCRETE SOURCE)
DISCRETE MULTICHANNELS USED FOR DIRECTIONAL CUES (L,R,C,RL,RR,ETC)	DISCRETE MULTICHANNELS USED FOR SOURCE SEGREGATION AND CUSTOMIZATION
COMPOSITE RENDERING (DISCRETE SOURCES ARE MIXED TOGETHER EARLY IN THE RECORDING & REPRODUCTION CHAIN)	DISCRETE RENDERING (DISCRETE SOURCES REMAIN DISCRETE ALL THE WAY THROUGH THE RECORDING & REPRODUCTION CHAIN)
INTEGRAL WAVE FORM OF DISCRETE SOURCES ARE LOST DUE TO THE MXING OF SIGNALS AND PARADIGMATIC DISTORTIONS	INTEGRAL WAVE FORM OF DISCRETE SOURCES CAN BE REPRODUCED BECAUSE THERE ARE NO PARADIGMATIC DISTORTIONS AND THE SOURCE SIGNALS REMAIN SEGREGATED

FIG. 21

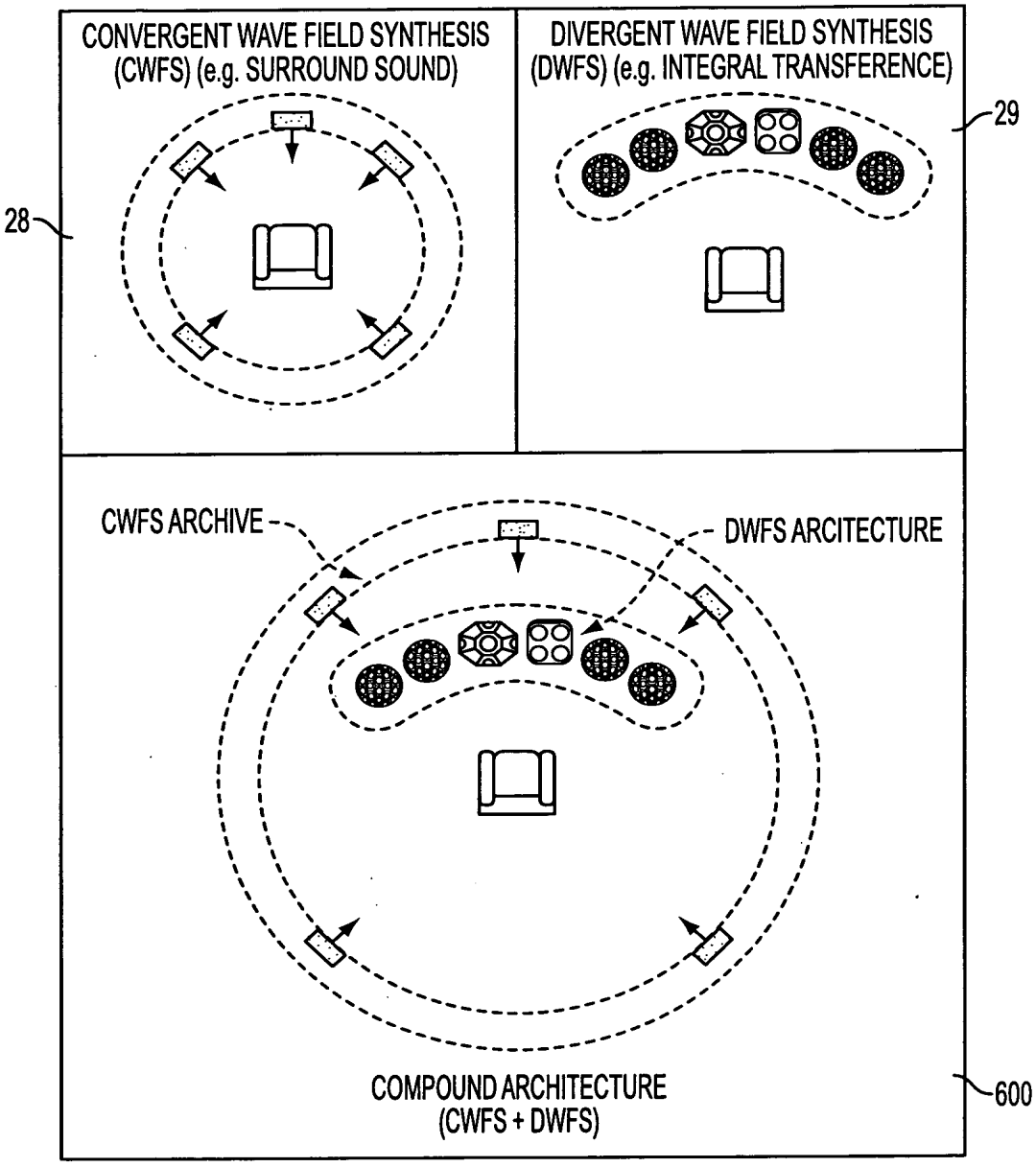

CONVERGENT WAVE FIELD SYNTHESIS
(CWFS) (e.g. SURROUND SOUND)
DIVERGENT WAVE FIELD SYNTHESIS
(DWFS) (e.g. INTEGRAL TRANSFERENCE)
28
29
CWFS ARCHIVE
DWFS ARCITECTURE
COMPOUND ARCHITECTURE
(CWFS + DWFS)
600

FIG. 22